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Journal of Advanced Ceramics is a peer-reviewed international journal published on behalf of the State Key Laboratory of New Ceramics and Fine Processing (Tsinghua University, China) and the Advanced Ceramics Division of the Chinese Ceramic Society.

Journal of Advanced Ceramics publishes the results of original research and reviews relating to advanced ceramics. The emphasis is on novel generic science concerning the relationship between processing, microstructure, and properties of particulates, dense or porous bodies, thin/thick films and laminated, graded and composite structures, etc.

Instructions for Authors

Please note that these Instructions include guidelines that are specific to *Journal of Advanced Ceramics*. Where the Instructions differ from the generic Springer version found on Springer.com, the version given here takes precedence.

1 Publishing ethics

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Author representations

Submission of a manuscript to *Journal of Advanced Ceramics* implies: that the work described has not been published before in any format including in languages other than English; that it is not under consideration for publication anywhere else; that its submission and publication has been approved by all co-authors, if any, as well as by the responsible authorities at the institute where the work has been carried out. The publisher will not be held legally responsible should there be any claims for compensation.

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Authors wishing to include figures, tables, or text passages that have already been published elsewhere (including in the authors' own previous papers) are required to obtain permission from the copyright owners for both print and online format and to state clearly in the figure/table caption or other appropriate locations in the manuscript that such permission has been obtained. All materials received without such statements will be assumed to originate from the authors.

2 Manuscript submission

Authors must submit their manuscripts online via the *Journal of Advanced Ceramics* Editorial Manager website at: <https://www.editorialmanager.com/jace>.

When submitting your manuscript, please make sure that the following items have been prepared as carefully as possible according to this Instruction:

- Cover letter.
- Manuscript containing title paper, abstract and keywords, and main body.
- All figures should be supplied in individual electronic files.

Please note that, since the Journal currently receives many more contributions than it is possible to accept, the submissions which were not well prepared according to the Instruction may be rejected directly without further review.

3 Article types

Journal of Advanced Ceramics publishes regular research articles, rapid communications, and review articles.

Regular research articles

Regular research articles report significant original research on, or techniques for studying, the fundamental relationships between processing, microstructure, and properties of advanced ceramics, either in 0, 1, 2, or 3-dimensional forms. In principle, a regular research article should be longer than 8 printed pages and a manuscript which does not meet these requirements will be returned directly without review. When preparing a manuscript, please keep in mind that a printed page contains approximately 700 words including equivalent word counts for figures and tables.

Rapid communications

Rapid communications, limited to 4 printed pages in length, emphasize on the new findings of exceptional novelty. When submitting a rapid communication, the authors should clearly indicate its novelty in a cover letter.

Review articles

Review articles are intended to be topical, comprehensive summaries of the state-of-the-art in a particular aspect. Clear conclusions should be produced which are more far reaching than the sum of the individual papers reviewed. There is no page limit for review articles. When submitting a review article, the author should state in a cover letter the community's need for the review and the differences between this review and others that has been published elsewhere. It is strongly suggested that the prospective authors of review articles should [contact the Executive Editor](#) before preparing their articles.

Journal of Advanced Ceramics also publishes Comments and Replies. Any reader may submit for publication a comment on any paper that has been published in the Journal and the author of the paper will be invited to reply. Comments and Replies are limited to two printed pages.

4 Manuscript format

Cover letter

All submissions must include a cover letter that includes:

- A confirmation of author representations that: the work described has not been published before; it is not under consideration for publication anywhere; and publication has been approved by all co-authors and the

responsible authorities at the institute(s) where the work has been carried out.

- A statement of the novelty and significance of the work, and the relevance to the aims of scope of *Journal of Advanced Ceramics*.
- Name, affiliations, and email addresses of at least three suitable referees, together with a brief statement of why they are qualified to evaluate the manuscript.

If the submission has previously been considered for publication by any other journal, the cover letter should include the manuscript's previous submission history and response to referees' comments, as an appendix to the cover letter.

Title page

The title page should include:

- A concise and informative title.
- The name(s) of the author(s), with symbols to line each name with that author's institutional affiliation and an asterisk to denote the corresponding author(s).
- The affiliations and mailing addresses of the authors.
- The e-mail address(es) of the corresponding author(s).

Title should be succinct, objective, interesting, and grammatically correct. The use of abbreviations in title is discouraged.

The author list should include only those who have made significant scientific contributions to the manuscript. Others who have contributed to the work should be noted in the Acknowledgements.

Changes to the author list between initial submission and revision must be accompanied by an explanatory statement in the cover letter for the revision and a completed "Change in Authorship Request" form, which will be sent by the Journal Editorial Office. These changes will be accepted at the discretion of the Editor and may lead to rejection of the manuscript. Changes of authorship or the order of authors are *not* accepted *after* acceptance of a manuscript.

Abstract and keywords

A concise and factual abstract not exceeding 250 words must be provided with each paper except Comments and Replies. The abstract should state briefly the purpose of the research, the principal results, and major conclusions. No footnotes, references, figures, or tables may appear in the abstract.

Immediately after the abstract, provide a maximum 6 keywords which can be used for indexing purposes.

Main body

Manuscripts describing original research typically include the following sections: Introduction; Materials and method; Results; Discussion; Conclusions; Acknowledgements; References. In submissions that have a significant theoretical or mathematical component, a section for the description of the analytical procedures may be required.

Electronic Supplementary Material

If ESM is submitted, it will be published as received from the author in the online version only. ESM may consist of: (i) information that cannot be printed: animations, video clips, sound recordings; (ii) information that is more convenient in electronic form: sequences, spectral data, etc.; (iii) large amounts of original data, e.g., additional tables, illustrations, etc. If supplying any ESM, the text must make specific mention of the material as a citation, similar to that of figures and tables (e.g., Fig. S1 in the ESM). Besides, a paragraph should be added before the "References" section (e.g., Electronic Supplementary Material: Supplementary material (add a brief description) is available in the online version of this article at <https://doi.org/10.1007/s40145-...>).

5 Text

Language

The Journal's language is English. Either British English or American English spelling and terminology may be used, but the system chosen should be followed consistently throughout the manuscript. We request that the language is corrected before submission. Submissions with unsatisfactory English writing will be returned without review.

The Journal's editors are not responsible for correcting errors in grammar or spelling. Articles that require extensive English revision may be rejected without further review.

Text formatting

Manuscripts should be submitted in Microsoft Word. PDF is *not* an acceptable format.

- Use a normal, plain font (e.g., 12-point Times New Roman) for text.
- Use only one column and use 1.5 or double-spaced text.
- Use italics for emphasis.
- Use the automatic page numbering function to number the pages.
- *Do not* use field functions.
- Use tab stops or other commands for indents, not be space bar.
- Use the table function, not spreadsheets, to make tables.

Headings

For regular research articles and review articles, please use the decimal system of headings. Please divide your article into clearly defined and numbered sections and subsections. Sections should be numbered 1, 2, etc. (The abstract is not included in section numbering). Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. Use this numbering also for internal cross-referencing: do not just refer to "the text". Each section and subsection should be given a brief heading and each heading should appear on its own separate line.

For Rapid Communications and Comments and Replies, no section levels are needed.

Abbreviations

Abbreviations should be used only if deemed absolutely necessary, and should be defined at first mention in the abstract and again in the main body of the text and used consistently thereafter.

Footnotes

Essential footnotes to the text should be numbered consecutively and placed at the bottom of the page to which they refer. Footnotes to the table should be indicated by superscript lower-case letters (or asterisks) and placed immediately below the table.

Equations

Numbering consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text), e.g.,

$$K = Y\sigma_f \sqrt{c} \quad (1)$$

and referring the equation with Eq. (1), Eq. (2), ..., in the text.

Please note that some equations entered using Microsoft Equation do not convert correctly when a submission written in Microsoft Word is converted into a PDF by Editorial Manager. Authors are encouraged to double-check all equations before final submission.

Scientific style

- International accepted signs and symbols for unites (SI units) should be used throughout.
- Nomenclature: insofar as possible, authors should use systematic names similar to those used by Chemical

Abstracts Services or [IUPAC](#).

- For the simple formulae which appear in the line of normal text, please use solidus (/) instead of a horizontal line for small fractional terms, e.g., x/y . Powers of e are often more conveniently denoted by “exp”.
- The following standard mathematical notations should be used for formulae, symbols, etc.: (i) Italics for single letters that denote mathematical constants, variables, and unknown quantities; (ii) Roman (upright) face for numerals, operators, and punctuation, and commonly defined functions; (iii) Bold face for vectors, tensors, and matrices.

6 References

Citations

References to the literature are cited by *number in square brackets* at appropriate locations (*before* a period, comma, etc.) in the text. Some examples are given below:

(1) There are several different methods, such as chemical precipitation [1], hydrothermal [2–4], sol–gel [2,5,6], and mechanochemical methods [7,8].

(2) This phenomenon was originally observed by John and Williams [1] in 1980.

(3) This effect has been widely studied [1–3,7].

Reference list

Please note that a submission may be rejected directly without review if the reference list does not meet the following guidelines.

All literature citations should be compiled in a *numbered reference list* at the end of the manuscript text (but before the Appendices), in the order of their *first* citation in the text. Each numbered reference may contain only *one* literature citation. The list of references should only include works that are cited in the text and that have been published or accepted for publication. Papers accepted for publication are cited as “in press”. Always use the standard abbreviation of a journal's name according to the ISSN List of Title World Abbreviations (<https://www.issn.org/services/online-services/access-to-the-ltwa/>).

Some examples:

(a) *Journal article*

[1] Han YC, Li SP, Wang XY, *et al.* Synthesis and sintering of nanocrystalline hydroxyapatite powders by citric acid sol-gel combustion method. *Mater Res Bull* 2004, **39**: 25–32.

(b) *Book (authored)*

[2] Lawn BR. *Fracture of Brittle Solids*. Cambridge (UK): Cambridge University Press, 1993.

(c) *Book chapter and paper in Proceedings*

[3] Craighead HG. Nanostructures in electronics. In *Nanomaterials: Synthesis, Properties and Applications*. Edelman A, Cammatata R, Eds. New York: Taylor and Francis, 1998: 565–566.

(d) *Others*

[4] Hammond PW. Four-quadrant AC-AC drive and method. U.S. patent 6 166 513, Dec. 2000.

[5] Peng ZJ. Surface modification of ceramic cutting tools by energetic ions. Ph.D. Thesis. Beijing (China): Tsinghua University, 2002.

[6] Information on <http://www.weld.labs.gov.cn>.

Do not use footnotes or endnotes as a substitute for a reference list.

7 Tables

- All tables should be numbered using Arab numerals and supplied with a table title which explain clearly and concisely the components of the table. Tables should not duplicate results presented elsewhere in the manuscript (for example, in figures).
- Tables should always be cited in text, such as Table 1, Table 2, in consecutive numerical order.
- The original sources of any previously published material is to be identified using a reference at the end of the table caption.
- Footnotes to the table should be indicated by superscript lower-case letters (or asterisks) and placed immediately below the table.

8 Artwork and illustration guidelines

All digital arts, including line arts, data plots and halftone arts, included in the manuscript should be supplied in a separate electronic file in TIFF, EPS, or JPEG format. Please note that a submission will be rejected directly without review if the submitted electronic figures do not meet the following guidelines.

Electronic figure submission

- Supply all figures electronically. Authors are encouraged to embed their figures in the document near the paragraph in which there are first referenced.
- Name your figure files with "Fig" and the figure number, e.g., Fig1.jpg.
- Please do not supply: (i) files that are optimized for screen use because these typically have a low number of pixels and limited set of colors; (ii) files that are too low in resolution; (iii) graphics that are disproportionately large for the content.

Line arts

- Definition: black and white graphic with no shading.
- Do not use faint lines and/or lettering and check that all lines and lettering within the figures are legible at final size.
- All lines should be at least 0.1 mm (0.3 pt) wide.
- Scanned line drawings and line drawings in bitmap format should have a minimum resolution of 1200 dpi.

Data plots

- Definition: graphical representation of data to reveal relationships between variables.
- Plots should follow guidelines for line art with, font sizes and file resolution. All plots should use a white background.
- Simple geometric symbols (e.g., open and filled triangles, squares, circles, etc.,) should be used for data points, with capped error bars to denote the precision of measurements.
- Axes should be labeled with the appropriate units included in parentheses.
- The use of Microsoft Excel to generate plots is strongly discouraged.

Halftone arts

- Halftone arts include micrographs, photographs, drawings, or paintings with fine shading, etc.
- If any magnification is used in the micrographs or photographs, indicate this by using scale bars within the figures themselves. Microscope-generated scale bars, particularly "tick-mark" style one, typically reproduce poorly and should be replaced by larger, more legible scale bars. Magnifications should not be given (e.g., 1000×).

- Screenshots of data from energy dispersive spectroscopy (EDS), mass spectrometry, nuclear magnetic resonance (NMR) spectroscopy, atomic force microscopy (ATM), etc., are *not* acceptable. Data must be plotted in a graphing program.
- Halftones should have minimum resolution of 300 dpi.
- The aspect ratio of any images should not be altered.

Figure lettering

- Keep lettering consistently sized throughout your final-sized artwork, usually about 8–12 pt.
- Variance of type size within an illustration should be minimal.
- Avoid effects such as shading, outline letters, etc.
- Do not include titles or captions within your illustrations.

Figure numbering and captions

- All figures should be numbered using Arab numerals (figure parts should be denoted by lowercase letters).
- Figures should always be cited in text, such as Fig. 1, Fig. 2, in consecutive numerical order.
- Each figure should have a concise caption describing accurately what the figure depicts. Include the captions in the text file of the manuscript, *not* in the figure file.
- Please make sure that all elements found in the figure are identified in the caption.

Figure placement and size

- When preparing your figures, size figures to fit in the column width.
- For *Journal of Advanced Ceramics*, the figure should be not wider than 80 mm for single-column figures or 170 mm for double-column figures, and not taller than 230 mm.

9 Review

- After submission, articles will be checked by the Springer's Journal Editorial Office (JEO) to ensure that it meets the guidelines set out in this document.
- Articles are automatically checked for text overlap. Those with high overlap scores are scrutinized by the Editor-in-Chief or the Executive Editor and may be rejected without further review.
- The Editor-in-Chief or the Executive Editor, or a handling editor assigned by them, has sole discretion on whether to send the article for peer review or reject it without further review. Unsolicited articles are evaluated by fit with the mission statement of the Journal, perceived quality and novelty of the work, potential interest to the Journal's readership, the standard of presentation (including the standard of technical written English and the quality of figures).
- Around four referees will be invited for peer review. When a submission has at least two (or one in exceptional cases) useable reports, the editor will use the referees' comments to decide whether to accept the manuscript for publication, return it for revision, or reject it.
- Infrequently, after several rounds of invitations to peer reviewers, a submission will receive no reports. In these cases, the submission may be rejected at the editor's discretion.
- Except in the cases of academic malpractice, only the corresponding author may request to withdraw a submission this is under consideration.
- Resubmissions are possible only with the explicit permission of the editor.

10 After acceptance

Proof reading

The purpose of the proof is to check for typesetting errors and the completeness and accuracy of the text, tables, and figures. Substantial changes in content, e.g., new results, corrected values, title, and authorship, are not allowed without the approval of the Editor-in-Chief or the Executive Editor.

Online first

The article will be published online after receipt of the corrected proofs. This is the official first publication citable with the DOI. After release of the printed version, the paper can also be cited by issue and page numbers.

After online publication, further changes can only be made in the form of an Erratum, which will be hyperlinked to the article.

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